

WHAT IS CLAIMED IS:

1. A mobile communication device comprising a first wireless section which carries out indirect radio communication and which is operable as a portable telephone, a second wireless section which carries out direct data communication, and a control section for carrying out communication control operation of both the first and the second wireless sections, wherein the control section comprises:

producing means for producing a power control signal indicative of intermittently operating the second wireless section;

the second wireless section comprising a power source which is intermittently put into an on-state in response to the power control signal.

2. A mobile communication device as claimed in claim 1, wherein the first wireless section has a power source controllable by the control section;

both power sources of the first and the second wireless sections being controlled individually and independently of each other by the control section.

3. A mobile communication device as claimed in claim 1, wherein the first wireless section has a power source controllable by the control section;

both power sources of the first and the second wireless sections being controlled by the control section on the basis of a predetermined condition.

4. A mobile communication device as claimed in claim 3, wherein the predetermined condition is that the power source of the second wireless section is intermittently and continuously turned on, while the first wireless section is in a waiting state and in a busy state, respectively.

5. A mobile communication device as claimed in claim 3, the first wireless section being changed between a waiting state and a busy state, wherein the predetermined condition is that the power source of the second wireless section is intermittently turned on only during the waiting state in synchronism with the change between the waiting and the busy state.

6. A mobile communication device as claimed in claim 1, wherein the control section supplies the second wireless section with the power control signal to intermittently put the second wireless section into an on-state and an off-state, so that the off-state becomes long when no reception state lasts for a predetermined duration.

7. A mobile communication device as claimed in claim 1, wherein the first and the second wireless sections have individual power sources;

the mobile communication device having a manipulation board which has first and second power switches for individually putting each power source of the first and the second wireless sections into the on-state and the off-state.

8. A mobile communication device as claimed in claim 7, wherein the power source of the second wireless section is put into the on-state when the second power switch is turned on, even if the first power switch of the first wireless section is put into the off-state.

9. A mobile communication device as claimed in claim 1, wherein the power source of the second wireless section is put into an off-state normally and is turned into an on-state only while data transmission/reception is being executed through the second wireless section.

10. A mobile communication device as claimed in claim 9, wherein the power source of the second wireless section is put into the

on-state only when data to be received/transmitted arrives at the second wireless section during the intermittent power supply.

11. A mobile communication system comprising a mobile communication device and an external device which carries out direct short range wireless data communication with the mobile communication device, the mobile communication device comprising a first wireless section which carries out indirect radio communication and which is operable as a portable telephone, a second wireless section which carries out direct data communication, and a control section for carrying out communication control operation of both the first and the second wireless sections, wherein the control section comprises:

producing means for producing a power control signal indicative of intermittently operating the second wireless section;

the second wireless section comprising a power source which is intermittently put into an on-state in response to the power control signal.

12. A mobile communication system comprising a mobile communication device and an external device which carries out direct short range wireless data communication with the mobile communication device, the mobile communication device comprising a first wireless section which carries out indirect radio communication and which is operable as a portable telephone, a second wireless section which carries out direct data communication, and a control section for carrying out communication control operation of both the first and the second wireless sections, wherein the control section comprises:

the second wireless section carrying out data transmission to the external device and transmitting a data transmission request to receive data sent from the external device in response to the data transmission request.

13. A mobile communication system as claimed in claim 12, wherein the data received/transmitted includes image, voice, melody, directory number, character, and the like.

14. A mobile communication system as claimed in claim 12, wherein the external device has a display monitor for displaying the data sent from the second wireless section of the mobile communication device.

15. A mobile communication system as claimed in claim 12, wherein the external device has an audio unit for reproducing the data sent from the second wireless section of the mobile communication device.

16. A mobile communication system as claimed in claim 12, wherein the mobile communication device has a reproducing unit for reproducing the data sent from the external device and received through the second wireless section.

17. A mobile communication system as claimed in claim 16, wherein the reproducing unit has data has a display unit/a loudspeaker for reproducing the data.

18. A mobile communication system as claimed in claim 12, wherein the external device is a computer.

19. A mobile communication system as claimed in claim 12, wherein the external device is a GPS device.

20. A mobile communication device having a portable telephone main block and a terminal portion which is mechanically separated from the portable telephone main block and which carries out short range wireless data communication with the portable telephone main block.

21. A mobile communication device as claimed in claim 20, wherein the portable telephone main block has a first antenna for radio

communication and a second antenna for the short range wireless data communication with the terminal portion.

22. A mobile communication device as claimed in claim 21, wherein the portable telephone main block comprises a first wireless section coupled to the first antenna, a second wireless section coupled to the second antenna, and a first control section coupled to the first and the second wireless sections.

23. A mobile communication device as claimed in claim 22, wherein the first and the second wireless portions have first and second power sources, respectively;

the control section intermittently putting the second power source into an on-state.

24. A mobile communication device as claimed in claim 22, wherein the terminal portion has a keyboard, a display monitor, a second control section coupled to the keyboard and the display monitor, and a third wireless section for carrying out short range wireless data communication with the portable telephone main block.